

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB2004/003389

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 B01L3/00 F16K21/08

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B01L F16K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/097422 A (YOO JAE-CHERN ; ELECTRON BIO INC (KR)) 5 December 2002 (2002-12-05) page 8, line 18 - page 11, line 29; figures 1A,B	1-57
X	WO 02/091028 A (COLORADO SCHOOL OF MINES) 14 November 2002 (2002-11-14) page 23, line 4 - page 33, line 23	1-57
A	US 4 938 742 A (SMITS JOHANNES G) 3 July 1990 (1990-07-03) the whole document	1-57
A	US 5 681 484 A (CHERUKURI SATYAM CHOUDARY ET AL) 28 October 1997 (1997-10-28) the whole document	1-57
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

Z document member of the same patent family

Date of the actual completion of the international search

4 November 2004

Date of mailing of the international search report

16/11/2004

Name and mailing address of the ISA

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 1 099 484 A (TRINITY COLLEGE DUBLIN) 16 May 2001 (2001-05-16) the whole document -----	1-57
A	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 22, 9 March 2001 (2001-03-09) & JP 2001 132861 A (EBARA CORP), 18 May 2001 (2001-05-18) abstract -----	1-57

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.2

Present claims 58, 59 relate to figures so that a lack of clarity (and conciseness) within the meaning of Article 6 PCT arises to such an extent as to render a meaningful search of the claims impossible. Consequently, the search has been carried out for those parts of the application which do appear to be clear (and concise), namely 1-57.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

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Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210.
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 02097422	A	05-12-2002	WO 02097422 A1	05-12-2002
			US 2004155213 A1	12-08-2004
WO 02091028	A	14-11-2002	WO 02091028 A2	14-11-2002
			US 2003012657 A1	16-01-2003
US 4938742	A	03-07-1990	NONE	
US 5681484	A	28-10-1997	US 5585069 A	17-12-1996
			AT 277450 T	15-10-2004
			AT 240155 T	15-05-2003
			AU 705351 B2	20-05-1999
			AU 4152396 A	06-06-1996
			AU 705659 B2	27-05-1999
			AU 4233796 A	06-06-1996
			CA 2204912 A1	23-05-1996
			CA 2205066 A1	23-05-1996
			DE 69530796 D1	18-06-2003
			DE 69530796 T2	27-11-2003
			DE 69533554 D1	28-10-2004
			EP 0791238 A1	27-08-1997
			EP 0808456 A1	26-11-1997
			JP 11500602 T	19-01-1999
			JP 3398749 B2	21-04-2003
			JP 2001509727 T	24-07-2001
			WO 9615450 A1	23-05-1996
			WO 9615576 A1	23-05-1996
			US 5643738 A	01-07-1997
			US 5593838 A	14-01-1997
			US 5846396 A	08-12-1998
			US 5985119 A	16-11-1999
			US 5755942 A	26-05-1998
			US 5863708 A	26-01-1999
			US 5858804 A	12-01-1999
EP 1099484	A	16-05-2001	EP 1099484 A1	16-05-2001
			EP 1099483 A1	16-05-2001
			IE 20000696 A1	16-05-2001
			IE 20000912 A1	16-05-2001
			US 2004101445 A1	27-05-2004
			US 6713021 B1	30-03-2004
JP 2001132861	A	18-05-2001	NONE	